Book Review

BOŘKOVEC, A. B. 1966. Insect chemosterilants. Advances in pest control research. Vol. VII. 143 pp. + x. R. L. Metcalf (Editor); Interscience Publishers.

This is the first volume in this series written by a single author. It is a refreshing departure from the usual review to the extent that Bořkovec has succeeded not only in reporting most, if not all, of the significant developments in the field, but also he has given some of the theoretical background, outlined the development of the field and given some tentative generalizations about the subject. These generalizations, Bořkovec emphasizes, are of a very tentative nature because of the rapid developments in this field.

The foreword to "Insect Chemosterilants", written by E. F. Knipling, outlines the principles and theoretical advantages of the sterilization technique for insect control. The text includes an introductory chapter (4 pages) and chapters on "Theory of insect-sterility control method" (10 pages); "Chemistry of insect sterilants" (27 pages); "Physiological effects of insect chemosterilants" (16 pages); and an appendix (44 pages). There are 284 references cited in the text. These and an additional 44 references which were "added in proof" provide a (hopefully) complete bibliography of the work on insect chemosterilants up to July, 1966. The references include not only published works but also citations of personal communications and United States patents.

The term chemosterilants, as used by Bořkovec, is defined as "chemical compounds which reduce or entirely eliminate the reproductive capacity of an animal to which they are administered ... it does not include chemicals which would directly or indirectly interfere with or prevent mating". Even within the framework of this rigid definition, the study of insect chemosterilants is a very rapidly developing area and has been the subject of two symposia; one held under the auspices of the Royal Society of Tropical Medicine and Hygiene in London, England, May 1964, and the other sponsored by the American Chemical Society in Atlantic City, New Jersey in September, 1965. Prior to the publication of this book, there had been six reviews of the subject, three of which were written, in whole or in part, by Bořkovec. The rapid developments in the field of insect chemosterilants are reflected in the dates of the references in this book: 270 of the 328 citations are from 1962 to 1966; the earliest references are to three papers published in 1947.

One of the most useful features of this book is the extensive appendix. Compounds reported in the literature as insect chemosterilants are listed alphabetically within groups and the organisms upon which they were tested and the references are given. To find out if a compound has been previously tested one must know to which group of compounds the chemosterilant belongs. Some compounds are listed under more than one group; e.g. 5-Azauracil is listed both as a Folic Acid analog (table II, Antimetabolites) and as an s-Triazine in the table of miscellaneous agents (table III); chloramphenicol is listed as both an alkylating agent (table I) and as a miscellaneous compound (table III). The double listing sometimes facilitates finding the compound listed.

The appendix also includes a table listing the species reported to be susceptible to chemosterilants. The references are given for each

entry but the chemical tested is not. With very little extra effort the cross references to the chemical could have been included and the table would have been more useful.

The volume is well bound, clearly illustrated and remarkably free of typographical errors. The subject matter is clearly presented and Bořkovec has collected a wealth of material of assistance to those interested in comparative physiology or in insect toxicology.

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